Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A phase angle detection system comprising:

rotary sensor comprising a magnet rotating about an axis and a plurality of magnetic field sensors angularly spaced about said axis;

a phase angle pulse modulation circuit and PWM generator circuit coupled to an input signal provided by each of said magnetic field sensors; and

a PWM to analog signal circuit coupled to an output of said modulator and PWM generator circuit.

2. (Original) The system of claim 1, wherein said rotary sensor comprises a first and a second magnetic field sensor spaced about 90 degrees apart about said axis.

3. (Currently Amended) The system of claim 1, wherein said phase angle pulse modulation circuit and PWM generator circuit comprises:

a quadrature oscillator adapted to generate a first signal equal to sin ωt and a second signal cos ωt;

an in phase multiplier adapted to multiply a sine input signal from said rotary sensor by said quadrature oscillator first signal;

a quadrature multiplier adapted to multiply a cosine input signal from said rotary sensor by a quadrature oscillator second signal; and

and adder circuit adapted to sum an output from said phase multiplier and an output from said quadrature multiplier.

4-7 (Cancelled).